

Signature of person mailing correspondence

1. The first part of the paper is devoted to the study of the asymptotic behavior of the solutions of the system (1) as $\epsilon \rightarrow 0$. It is shown that the solutions of the system (1) converge to the solutions of the system (2) in the sense of the weak convergence in the space $L^2(\Omega; \mathbb{R}^n)$.

Cross Reference To Related Applications

5 This application is a continuation-in-part of Clark et al. U.S.S.N. 09/415,622,
"Internet Coaching," filed October 12, 1999, which in turn is a continuation-in-part of
Clark U.S.S.N. 09/379,448, filed August 23, 1999.

Background of the Invention

10 This invention relates to a high priority of many adult North Americans is to look
good and feel good. Most have taken some steps in their adult lives to look and feel
better. The fact is that most fail to stick with these steps. They also fail to look and feel
their best, most of the time.

15 There is a wealth of information and ideas available from books, television, friends,
family, doctors, and now the Internet. It is daunting, however, for most people to find
and sift through the enormous amount of conflicting information and then devise a
program of steps that fit into their lifestyles. Even more difficult is the development and
execution of a personalized and staged plan over their lifetimes. Hardest of all is
sustaining motivation on one's own.

20 The Web has thousands of sites providing current information and advice on health,
fitness, nutrition, and wellness. Many such sites are described in a book entitled
WebDoctor, by Vicki and Richard Sharp (St. Martin's Griffin, New York, 1998), hereby
incorporated by reference.

A few examples of interactive, health-related Web sites are given below.

1/.

Mayo Health Oasis sponsored by the Mayo clinic, provides health information and includes Ask Mayo, permitting users to ask questions of medical experts.

American Heart Association: heart disease information and online risk assessment test for heart disease.

- 5 Basal Metabolism: the program asks for individual information (e.g., weight and activity level) and returns daily caloric and protein, fat, and carbohydrate requirements.

The Eat Well Calculator: the individual reports details of food intake and online experts "tell you how well you're doing."

- 10 LifeMatters: "An ongoing conversation about taking charge of one's health and well-being for a life that is empowered, fulfilled and profoundly related." The site is an interactive forum that draws on various experts.

Phys Nutrition for Normal People: an interactive online magazine for women; the site's personal nutritionist provides customized diet plans.

- 15 Ask An Expert: Health: a directory of health experts, including their Web sites so individuals can ask them questions.

Health Status Questionnaire: online version of Rand's 36-question survey for self-evaluation of health.

- 20 You First: personalized online health risk assessment report, including recommendations to improve health.

HomeArts Winning at Losing: a four-week weight loss plan for women, including interactive program to calculate calories burned during various activities.

A Man's Life: includes an interactive personal trainer called the Big Sweat, where the individual can request advice for training particular body parts.

5 Magic Stream Journal: includes an online counseling service available 24 hours a day.

Metanoia Guide to Internet Mental Health Services: provides access to counselors who provide online mental health services.

While a great deal of useful information is contained in sites such as those described above, they are usually unsuccessful in causing lasting positive changes in the lives of
10 large numbers of people.

Summary of the Invention

The invention uses the power of the Internet, combined with long-term, one-on-one motivational coaching, to bring about positive changes in many lives, and to sustain and
15 build on those changes over time.

The invention features a personalized, interactive, progressive, Internet-based coaching system. The system of the invention can be used to help individuals ("clients") address their ongoing concerns, such as health and fitness, financial planning, career development, elder care, and menopause. The system can be illustrated by describing the
20 health and fitness program that employs the unique concepts of the invention. These principles are applicable to any of the programs encompassed by the invention.

As in all of the programs to which the methods of the invention are applicable, the health and fitness program includes, as a key component, assigning to each client a personal coach who interacts with the client, via the Internet, to improve the health and fitness of the individual. The first step is to establish the baseline health, fitness, stress, weight, and nutrition facts for the client. This is done by having the client complete a questionnaire that inquires into the client's general health (including the presence of disease states such as diabetes and coronary artery disease), eating habits, stress levels, daily schedules, patterns of exercise, and readiness to change in each area.

The coach proposes guidelines and initial health, nutrition, fitness, and wellness goals based on the baseline information provided by the client in the questionnaire. The coach then works with the client online to agree the short-term and longer-term goals, and helps the client take small steps each week toward the goals.

To maintain early gains in health and fitness, and in particular to build on those gains to achieve the next level, the client must, we believe, develop a long-term relationship with her personal online coach. The coach becomes, over time, intimately familiar with her client's life habits as they evolve and change in response to coaching. Only a coach who has worked with a client over time can provide the trust-based motivation necessary to achieve lasting, progressive improvements in health and fitness. The coach knows, respects, and cares about each of her clients. She cheers her client's victories and helps her, in a positive way, understand and improve on the habits and behaviors that have stood in the way of her looking and feeling her best.

Another vital link in the motivational process that is essential for real, lasting change is the client's ability to rely on a regularly scheduled one-on-one online coaching slot with

her coach. This fixed schedule achieves several important objectives.

First, a schedule eliminates the uncertainty that would ensue with random or unscheduled sessions.

Second, the scheduled sessions give the client something to look forward to: she
5 knows that at 3 pm twice per week, for example, she will have the chance (over the
Internet) to tell her coach, with whom she has developed a bond of mutual respect and
caring, of her gains over the past two days. She also knows that this scheduled session
provides her the opportunity to talk to her coach online about any new (or chronic) health
or wellness-related problems, and find out what her coach suggests to address the
10 problems. Immediate solutions, of course, are not always possible, and are in any event
not the only dividends of coaching; the client, like any other human being, wants to be
listened to by someone she knows, and who cares about her.

Finally, a fixed schedule relieves the client from a large portion of the motivational
burden to keep going on the program: the client does not need to summon the will, or
15 find that she cannot summon the will, to contact a counselor at a given time. That
component of her motivation is already fixed, for the foreseeable future, and the client is
freed from struggling with that issue anew every time she thinks she might benefit from
counseling. She can instead focus her efforts on maximizing the benefits of each
scheduled coaching session.

20 Interaction by the Internet provides advantages for coaching that are not possible by
other means. Individuals with concerns are often embarrassed and reserved about
discussing their problems in person or by telephone. Where a client's concerns relate to
personal appearance, she may be uncomfortable being looked at by a coach. Individuals

will often say things online that they wouldn't say in person, or even on the telephone.

The Internet mode of contact can facilitate more intimate, open, and honest discussion of difficult issues, enabling a more effective ongoing interaction with a coach.

- 5 The coaching system of the invention is applicable not just to health-related issues. Indeed, the invention can be used to coach clients on any issue that, for at least a period of time, or during a life stage, is ongoing in nature. Examples are: relationships (family, romantic, professional), stress and anxiety, depression, pregnancy, addiction, e.g. to alcohol or tobacco, child rearing, careers, menopause and andropause, chronic diseases
- 10 such as diabetes, retirement, management of finances, elder care, e.g. caring for relatives with Alzheimer's disease, caring for disabled persons, and caring for pets.

- Accordingly, the invention features a method by which a company provides interactive, Internet-based, ongoing advice and coaching to a plurality of individuals, involving:
- 15 a) providing a cadre of trained coaches, all of whom interact with clients via the Internet using as guidance a coaching manual and training provided by the company and/or its affiliates; b) at some stage in the method prior to step f), below, assigning, from the cadre of coaches, an online personal coach to each individual; c) receiving from the individual information particular to an ongoing concern of the individual (e.g., weight loss or cardiac rehabilitation); d) based on the information provided in step c), devising a
- 20 set of recommendations for the individual pertinent to the individual's ongoing concern; e) transmitting recommendations of step d) to the individual via the Internet; f) having transmitted to the individual's coach, via the Internet, particularized information from the individual pertaining to the ongoing concern of the individual, wherein the information includes reportage of events occurring in the life of the individual subsequent to the
- 25 transmittal of the recommendations of step e); g) based on the information received by the individual's coach in step f), having the coach devise a further set of recommendations

for the individual pertinent to the ongoing concern of the individual; h) transmitting the recommendations of step g) to the individual via the Internet; and i) repeating steps f-h) multiple times.

5 In preferred embodiments, the online interactions between the individual and the coach of steps f-h) include real-time dialogues; and the interactions occur at scheduled times. Coaching sessions occur either entirely online, or have one or more online components, including one, two, or all of "chat," Internet telephone, Internet audio other than telephony, and video formats. Conventional telephony can in some instances be used in conjunction with the Internet components.

10 A feature that can be added to the coaching process to provide an operant conditioning component that can enhance progress in meeting client goals is to provide incentives for reaching goals. Thus, the company provides rewards, or points redeemable for rewards, for achievement of goals. For example, if a client loses ten pounds over a period of three months, consistent with goals the coach and client have set for the client, the company
15 gives the client a reward such as a piece of fitness equipment or apparel, or points in the company's system that are redeemable for high-quality items that market research has shown clients want, including new items of clothing that accentuate improvements in appearance. These items are selected by the client from catalogues based on arrangements with apparel or other companies, or from the company's own catalogue.

20 Points in the reward system can be earned as well in at least two other ways: 1) clients are awarded points for agreeing to communicate (usually by the Internet), with prospective clients; this helps build the business in an effective way, with testimonials; and 2) clients are awarded points for being on time for or not missing some predetermined number of scheduled coaching appointments.

This system of rewards for achieved goals is in an important sense the antithesis of incentive systems of other health-related programs. For example, in the Jenny Craig weight-loss system, it is the client, not the company, that is rewarded for the reaching of client goals; the client pays the company one dollar for every pound the client loses. This
5 in effect is the opposite of operant conditioning; the benefit of weight loss is accompanied by a monetary penalty. The system of the invention, in contrast, sends the client a consistent message: reaching the client's goals is accompanied by a further benefit, awarded by the company. Thus the client has two sources of motivation for reaching her goals, and is more likely to do so.

10 The company, according to one preferred method of the invention, charges clients fees for the coaching service provided. The method includes, optionally, additional sources of revenue as well. One such source is selling advertising space on the Web site the company maintains to inform the public of the company's coaching service and attract new clients. Another revenue source arises from the sales of products through the
15 company's Web site, whereby the sales generate a commission for the company based on the volume of sales. To maintain the integrity and reputation of the coaching process, it is essential that all of the products in both the advertising and product tie-in revenue streams be of the highest quality, and be the types of products that are consistent with the client's program, the company's philosophy, and guidelines as set out in the coach
20 manual.

There will also be provided a public-access Web site that describes the coaching program and tells visitors to the site how to become clients or coaches. The site will post frequent announcements of new program-related breakthroughs, and as well may carry advertising for high-quality program-related products.

Another optional feature that can enhance the commitment, loyalty and team spirit of the coaches is a chat room to which only the coaches, but not the clients or the general public, have access. The coaches' chat room can serve as an after-hours retreat for the coaches, and provide them an opportunity to compare notes on client issues and the coaching process.

In addition, the program can include a chat room to which only the clients, but not the coaches or the general public, have access. This site provides the clients with the chance to support each other in their struggles to overcome problems they have in common. In addition, relationships, including romantic ones, can be fostered through such a site, and indeed can be formalized thorough a Web site-specific introduction program.

Both the clients' chat room and the coaches' chat room may feature, from time to time, guest "speakers," who are authorities on relevant topics.

Some clients will be hesitant to sign up for the coaching program because they do not place a high enough priority on their own health and fitness. To reach such clients, the company may offer gift certificates to individuals who purchase the coaching services for a spouse, child, family member, friend, or colleague.

An objective of the programs of the invention is to provide practical, personalized plans and ongoing, Internet-based coaching to help people improve their lives. One program, the "look better and feel better" program, helps clients lose weight, increase physical activity, reduce stress, improve their nutrition, and reduce their health risks.

Database and Manual

The “look better and feel better” program will draw on a large and comprehensive database of old and new approaches to improving health, fitness, and well-being. The database will be continually updated, with the aid of expert advisors. The database is used primarily for two purposes: 1) the development of a coach manual, which is continuously updated. Each coach has access to the manual, which is used both to train and test the coach prior to her beginning her coaching of clients, and as a reference for providing online recommendations to clients. The manual is a key component of the system, as it ensures uniformity of philosophy and substance from coach to coach in advising clients.

Coaches

Coaches will be recruited from a range of backgrounds. Preferably, they will be college educated, and have educational and/or work experience in fitness, health, nutrition, education, nursing, counseling, physical therapy, exercise physiology, or social work. Coaches will be chosen as well for their natural coaching ability, empathy, and integrity.

Client Files

An important advantage of providing one-on-one coaching via the Internet is that an electronic (i.e., digital) record can be kept of the goals that the coach and client set for the client, and the history of the client’s meeting of those goals. In one preferred embodiment, a coaching session that takes advantage of the stored goals proceeds as follows.

The client and coach logon at the predetermined time, and recording (both audio
taping and digital recording of text) of the session begins. A running clock appears on
the screens of both client and coach. At the start of the session, both the client and the
coach are viewing the same on-screen text listing the client's goals from the previous
5 week or other period during which they had agreed on those goals; they use the present
session, at least in part, to discuss whether the goals have been met, and strategies for
meeting those that are still unmet. For example, the client may have had, as the previous
week's goals, the following: 1. substitute, for night-time sweet snack, a low-calorie
snack; 2. determine schedule of locally-offered yoga and step classes; 3. walk instead of
10 drive to the train station five days in a row.

As the session begins, the coach's talking head appears on the client's screen; the
coach and client talk via Internet telephony or telephone about the previous week's goals,
the challenges in meeting some of them, goals for the next time period, and other
remaining issues. Although the coach's face is visible to the client, the client can choose
15 to be seen or not seen by the coach, allowing the client to maintain privacy and modesty
(he can be sitting in the bathtub if he likes).

During or following the recorded session, one or both of client and coach type goals
for the next time period (a week, bi-week, or month). This new goal text, along with the
text of the previous goals, is stored in the client's electronic file; the file can be called up
20 on the client's screen at any time between coaching sessions. This file allows the client
to track her progress over time, and encourages the client to view her personal growth
project in a manner similar to the way she would view a long-term assignment at work,
i.e., tracking goals met and not met is in some respects an exercise in project

management. The file acts not just as a long-term motivating force, but also as a reality check: the client can instantly check whether, six months ago, she really did weigh more than she does now.

The Business

5 As is described above, all of the coaches must pass the same training and testing, based on a common database and manual. The manual is created by a program development team that also manages and continually updates the database and manual.

10 Many or all of the coaches work from their homes, and can choose to work as many hours as they wish. There are no geographic limitations to their home locations; the only requirement is that they be able to travel to training and refresher sessions. The coaches are paid a percentage of the client fees based on a company schedule.

15 Once a coach has passed the training and testing, she is assigned a number of clients for whom she will serve as the online personal coach. The coaching of the client proceeds and evolves over time as described above, beginning, in most cases, with the development by the coach of an initial 3-month plan. This initial plan serves as the framework for the day-to-day coaching interactions, and is constantly being refined and built upon.

20 The client chooses the frequency of the coaching sessions, and might also choose from a selection of options for the duration of each session; generally, the sessions will be fifteen to thirty minutes long. Frequency and duration of coaching sessions can be adjusted by the client as her personal plan, goals, progress, and needs evolve.